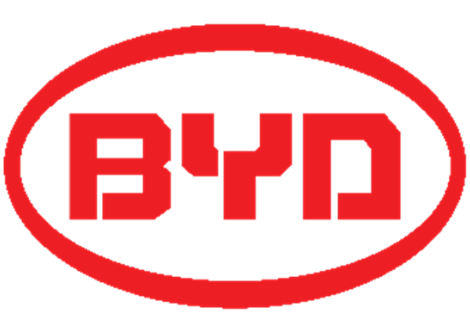

BATTERY RECYCLYING

BATTERY RECYCLING

BATTERY RECYCLING PLAN

The BYD battery has been specifically designed to yield a long life. We anticipate 20 years on a vehicle and another 20 repurposed for stationary energy storage. If a bad unrepairable cell or cells does finally occur we have conducted our research and would recycle the batteries through several major recycling facilities that use the closed loop “battery to battery” process. These recyclers all have similar but “proprietary” processes so we are only able to present an overview as follows.

The recycling processes are specifically designed to reach a high recycling efficiency for new generation rechargeable batteries. Large industrial batteries, from hybrid and full electric cars, are first dismantled in a dedicated dismantling line and the aluminum or plastic housings are sent to traditional aluminum or plastic recycler to be fully recycled. The balance of the battery core is sent to the smelting operation

OUTPUT PRODUCTS OF THE SMELTING PROCESS:

Metal fraction: Alloy containing all Ni, Co, FE and other valuable metals. These metals, can be further refined and later transformed into Ni(OH)2 and LiMeO2 (Me: Co, Ni, Mn) as active cathode materials for new batteries. In that way, the loop is closed “from battery to battery”.

Slag fraction: The slag from Li-ion batteries is completely inert and non-hazardous and can be used as construction materials. When processing NiMH batteries, the REE contained in the batteries are collected in the slag fraction. They can be further refined to produce pure REE oxides.

Gas emissions: the gas cleaning installation ensures that no harmful dioxins or volatile organic compounds (VOCs) are produced. It also collects all possible dust carry over.